



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,953

09/08/2006

Tomas Nylander

4144-9

6872

23117 7590 09/16/2008  
NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

WANG-HURST, KATHY W

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

09/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,953	<b>Applicant(s)</b> NYLANDER ET AL.	
	<b>Examiner</b> KATHY WANG-HURST	<b>Art Unit</b> 4173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

1. Applicant's amendment filed on 7/27/2008 has been entered. Claims 1, 3, 4, 6, 7, 11, 13, and 14 are editorially amended. Two claims have been added and renumbered to claim 18 and 19. Claims 1-15, and 18-19 are still pending in this application with claims 1, 11 and 14 being independent.

***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 16 and 17 have been renumbered 18 and 19.

***Response to Arguments***

3. Applicant's arguments received on 7/27/2008 have been fully considered but they are not persuasive.

The applicants argued features wherein a unlicensed radio access network and method, connected to a licensed communication network, having an access controller connected to the licensed network and a database storing and deleting mobile station information upon registering and leaving the coverage area respectively, and said unlicensed

Art Unit: 4173

network having multiple access points each of which having a coverage area and said licensed network covering one or more location areas, read upon Gallagher as follows.

Gallagher is discussing using an unlicensed wireless communication system to extend the coverage area of a licensed wireless communication system. The unlicensed

network comprises an indoor network controller which is connected to a licensed network and a broadband network. The broadband network has multiple access points

and each access point covers a cell area. Thus Gallagher show the limitation of

“unlicensed-radio access network comprising an access controller connected to said core network portion, a fixed broadband network connected to said access controller and having a plurality of access points, each said access points defining a mini-cell coverage area and supporting an unlicensed radio interface permitting communication between mobile station located within a respective mini-cell and said access controller”.

Gallagher discusses location area identification information is used by the indoor network controller for registration and mobility management purposes. Indoor base station stores area identification information and sends a deregister message to the indoor network controller to deregister a mobile set when the indoor base station detects the received signal is not longer acceptable. The indoor base station releases all resources associated to the mobile station. Therefore Gallagher shows the limitation of “said access controller comprises a database for storing the identification of mobile station in association with address information of said mobile station on said broadband network, said access controller being adapted to delete said identification data when

Art Unit: 4173

said mobile station ceases to operate in the coverage areas of said unlicensed radio access network”.

Therefore, the argued limitations read upon the cited reference, as follows.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-15 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Gallagher (US 7127250).

Regarding claim 1, Gallagher discloses an unlicensed-radio access network connected to a core network portion of a licensed mobile network, said unlicensed-radio access network (**Abstract**) comprising:

an access controller (**Fig. 2, item 132**) connected to said core network portion,

a broadband network (**Fig. 2, item 130**) connected to said access controller and

comprising a plurality of access points (**Fig. 2, item 128**), each said access point

defining a mini-cell coverage area and supporting an unlicensed-radio interface

permitting communication between mobile stations (**Fig. 2, item 102**) located within a

Art Unit: 4173

respective mini-cell and said access controller,

wherein said access controller is associated with one or more location areas in said licensed radio mobile network (**Fig. 2, items 116 and 118**) and comprises a database (**col. 13, line 33, IAN-System-Information wrapper; col. 16 lines 55-57 stored IAN-System-Information, therefore database**) for storing an identification of mobile stations in association with address information of said mobile station on said broadband network (**col. 13, lines 24-37, Local Area Identification, Routing area Identification, Cell Identification, therefore address information of said mobile station on broadband network**).

said access controller being adapted to delete said identification data when said mobile station ceases to operate in the coverage areas of said unlicensed radio access network (**Col. 16, line 61-Col. 17 line 2, mobile station is deregistered when the received signal is no longer acceptable. Col. 17 lines 20-22 and col. 15 lines 42-45, MSC sends CLEAR-COMMAND to indoor network controller to release resources, therefore delete identification data**).

Regarding claim 2, Gallagher discloses an access network as claimed in claim 1, that wherein said database is adapted to store the identification of mobile stations in association with at least one specific access point for the coverage area in which said mobile station is located. (**Col. 12, lines 1-10**)

Art Unit: 4173

Regarding claim 3, Gallagher discloses an access network as claimed in claim 1, wherein said access point controller is adapted to receive from said core network portion a paging message containing the identification of a mobile station located in the associated location area, to identify the at least one access point associated with said identified mobile station, and to transmit said paging message to said identified at least one access point only. **(Col. 12, line 19-22)**

Regarding claim 4, Gallagher discloses an access network as claim1, wherein said access network controller is adapted to receive from a mobile station a message registering identification data for said mobile station and to store said new identification data in said database in association with address information for said mobile station on said broadband network. **(Col. 14, lines 57-60)**

Regarding claim 5, Gallagher discloses an access network as claimed in claim1, wherein said mobile station identification data is the international mobile subscriber identity (IMSI). **(Col. 13, line 13)**

Regarding claim 6, Gallagher discloses an access network as claimed in claim1, wherein said address information comprises a network address of said access points on said broadband network. **(Col. 12, lines 26-43)**

Art Unit: 4173

Regarding claim 7, Gallagher discloses an access network as claimed in claim 6, wherein said address information identifies an access point communicating with said mobile station. **(Col. 12, lines 26-43)**

Regarding claim 8, Gallagher discloses an access network as claimed in claim 1, wherein said access controller is adapted to delete said identification data on receipt of a message from said access point that said mobile station is no longer communicating with said access point. **(Col. 16, lines 61-67 and Col. 17, lines 1-25)**

Regarding claim 9, Gallagher discloses an access network as claimed in claim 1, wherein said access network controller is adapted to determine whether a connection with said mobile station is maintained and to delete said identification data on determining that said connection is no longer maintained. **(Col. 16, lines 61-67 and Col. 17, lines 1-25)**

Regarding claim 10, Gallagher discloses an access network as claimed in claim 1, wherein said database is adapted to store the identification of mobile stations in association with a group of access point addresses, wherein said unlicensed access network comprises more than one group of access points. **(Col. 12, lines 1-25)**

Regarding claim 11, Gallagher discloses a method in an unlicensed-radio access network **(Fig. 2)** comprising a plurality of access points adapted to communicate with



Art Unit: 4173

mobile stations over an unlicensed radio interface and an access controller connected to said access points via a broadband network and to a core network portion of a

licensed radio cellular network, said method comprising:

receiving identification information specific to a mobile station from said mobile

station(**Col. 14, lines 57-58**),

registering said mobile station identification information in association with information

identifying at least one access point in said access point controller (**Col. 12 lines 45-49**

**and Col. 13 lines 17-37 registering mobile station with indoor network controller**),

and updating said registered information when communication between said mobile

station and said unlicensed radio access network ceases (**Col. 12, lines 49-53 location**

**update upon leaving indoor coverage area, therefore updating information when**

**communication between mobile station and unlicensed network ceases**).

Regarding claim 12, Gallagher discloses a method as claimed in claim 11, further comprising:

receiving in said access controller a message from said core network portion paging a

mobile station, retrieving information identifying at least one access point for said paged

mobile (**Col. 12, lines 19-22, core network sending paging request to base**

**subsystem where mobile station is registered**), and

forwarding said paging message only to the at least one access point identified in

association with said registered mobile station identification information. (**Col. 12, lines**

**1-25, a single area includes multiple base station subsystems and core network**

Art Unit: 4173

**will page the mobile station to base station subsystem where mobile station is registered )**

Regarding claim 13, Gallagher discloses a method as claimed in claim 11, wherein said registering includes registering said mobile station identification information in association with information identifying a group of access points in said access point controller. **(Col. 11, lines 60-67)**

Regarding claim 14, Gallagher discloses a method in an unlicensed-radio access network **(Fig. 2)** comprising a broadband network with plurality of access points and an access controller connected to said broadband network and to a core network portion of a licensed-radio cellular network and adapted to communicate with mobile stations over an unlicensed-radio interface via said access points, said method of comprising: said access controller establishing communication with a mobile station using a network address on said broadband network for said mobile station **(col. 13 lines 17-**

**37Location are Identification and Routing Area identity, which are shared between IAN system and the GSM network, as indicated in col. 12 lines 40-42),** receiving identification information specific to a mobile station from said mobile station **(Col. 14, lines 53-56),**

registering said mobile station identification information in association with said mobile station network address on said broadband network **(Col. 13, lines 17-37) ,**

Art Unit: 4173

determining when a connection established with said mobile station is no longer maintained (**Col. 16 lines 61-65, mobile station detects the loss of connection**).

and deleting said mobile station identification information when it is determined that a connection is no longer maintained. (**Col. 16, line 61-Col. 17 line 2, mobile station is deregistered when the received signal is no longer acceptable. Col. 17 lines 20-22 and col. 15 lines 42-45, MSC sends CLEAR-COMMAND to indoor network controller to release resources, therefore delete identification data**).

Regarding claim 15, Gallagher discloses a method as claimed in claim 14, further comprising:

receiving in said access controller a message from said core network portion paging a mobile station, retrieving mobile station identification information registered for said paged mobile, and forwarding said paging message only to the network address identified in association with said registered mobile station identification information. (**Col. 14, lines 60-63, network controller monitors the paging request from the core network, and Col. 12, lines 18-22 paging to the subsystem where the mobile station is registered**)

Regarding claim 18, Gallagher discloses an access network as claimed in claim 1, wherein the broadband network is a fixed broadband network (**Col. 24 lines 36-40**).

Regarding claim 19, Gallagher discloses a method as claimed in claim 14, wherein the broadband network is a fixed broadband network (**Col. 24 lines 36-40**).

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

Art Unit: 4173

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/  
Examiner, Art Unit 2617

/NICK CORSARO/  
Supervisory Patent Examiner, Art Unit 2617